

ENERGY/FACILITIES  
CONNECTIONS

Wenatchee 2005



## Shop Talk

Energy/Facilities Connections  
Conference Guide

## Welcome to the inaugural Energy/Facilities Connections conference!

Washington's Department of General Administration is honored to serve as your host and primary sponsor. We titled the event "Connections" because we know you'll be linked with solutions to vexing challenges and have opportunities to network with dozens of fellow professionals and subject experts.



Linda Villegas Bremer

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Please jump into the discussions, offer your perspectives and record your observations, so that others in your organization may benefit when you return to your home organizations.

W. Edwards Deming, the "father" of Total Quality Improvement, once said, "If you can't describe what you are doing as a process, you don't know what you're doing." This Energy/Facilities Connections conference can be viewed as a critical component of your professional development process and will provide you tools to better complete your challenging roles in your daily jobs.

Sustainability, green buildings, resource conservation, stewardship, LEED™, indoor air quality and emergency preparedness are but a few of the processes you'll explore during the conference.

Many of the speakers of the breakout sessions are representatives of successful facilities and energy-related companies with which we do business. They bring depth and seasoning to our two-day event. Our focus is on providing a singular training opportunity for those in public sector or associated service.

Our four tracks reflect the diversity of topics and were selected by you, our valued participants:

- Facilities management.
- Maintenance and operations.
- Sustainability.
- Technology and resources.

The GA Energy Team and the Plant Operations Support Consortium have teamed to produce this conference. The Energy Team recently celebrated completion of \$100 million in energy-efficiency projects. The team manages award-winning programs, such as commissioning and retro-commissioning, green building design and construction, and energy-saving performance contracting.

The Plant Operations Support Consortium is comprised of state/provincial agencies, educational facilities, municipalities, port and public utility districts. The consortium includes hundreds of professionals who regularly share solutions and lessons-learned. The Consortium has saved its members more than \$24 million in avoided costs in nine years, and has earned numerous international, national and state awards for service excellence and innovation.

Again, welcome to the conference. Let's continue our partnership by sharing our knowledge.

Linda Villegas Bremer  
Director of Washington Dept. of General Administration

For more information about Washington's General Administration Energy Team or the Plant Operations Support Consortium, contact:

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**Thanks to our sponsors:** Chelan County Public Utility District • Northwest Energy Efficiency Council  
Wenatchee School District • Washington State University Energy Extension Service  
Washington State Department of General Administration

# Conference Agenda

## Wednesday, May 11, 2005 (Day One)

7:30 - 9:00 Registration and continental breakfast  
 Grand Apple South Room  
 8:00 - 8:15 Orchard Middle School Jazz Band  
 Grand Apple South Room  
 9:00 - 10:00 Welcome by Wenatchee Mayor Dennis Johnson  
 Orchard Exhibit Hall  
 Guest Speaker Joe Jimenez speaking on "Connections Defined"  
 Colors posted by Wenatchee American Legion Post 10 Honor Guard, National Anthem by Wenatchee HS HyTones

*After the opening session, you may follow one track start to finish, or pick individual sessions from each that interest you.*

Breakout Sessions	Track A: Facilities Management	Track B: Maintenance and Operations	Track C: The Sustainable Road	Track D: Technology and Resources
<b>Session 1</b> 10:30 - 11:45	Ecology Building Case Study - An Approach to Conquering IAQ Issues (Gala Room 1 & 2)	Building Tune-ups to Improve Your Bottom Line (Gala Room 3 & 4)	Alternative Energy: Solar and Wind (Fuji Room 1 & 2)	The Latest in Energy Efficiency Technologies (Fuji Room 3 & 4)
<b>Session 2</b> 1:30 - 2:30	Be Prepared When Disaster Strikes (Gala Room 1 & 2)	How the Approach of Competitive Contracting Helped Us Improve Performance (Gala Room 3 & 4)	The New Kid on the Green Building Block - LEED for Existing Buildings (Fuji Room 1 & 2)	Good to the Last Drop (Part 1): Water Reductions to Save Costs (Fuji Room 3 & 4)
<b>Session 3</b> 3:00 - 4:00	Telling the Story: Taking CAFM to the Next Level (Gala Room 1 & 2)	How to Tell Your Story to Financial Leaders and Decision-Makers (Gala Room 3 & 4)	LEED for Existing Buildings Showcased in the Ecology Building (Fuji Room 1 & 2)	Good to the Last Drop (Part 2): Landscape, Retrofits, and More (Fuji Room 3 & 4)

Please join us for a no-host networking session at 5 to 7 p.m. at the Roaster and Ale House Lounge on the 9th floor.



**Thursday, May 12, 2005**

7:30 - 8:00

Continental breakfast

Grand Apple South Room

8:00 - 8:30

Foothills Middle School Jazz Band

Grand Apple South Room

Welcome by the Apple Blossom Queen and Court and rally with Bob Grand Apple South Room

*After the opening session, you may follow one track start to finish, or pick individual sessions from each that interest you.***Breakout Sessions****Track D:  
Technology and  
Resources****Track C:  
The Sustainable Road****Track B:  
Maintenance and  
Operations****Track A:  
Facilities Management**

Break Time 8:30 - 8:45

**Session 4**

8:45 - 10:00

How to Tell Your Story to  
Financial Leaders and  
Decision-Makers  
(Gala 1 & 2)Getting What We Need to do  
the Job - CMMS is the Solution  
(Gala 3 & 4)Washington Sustainable  
Schools Program  
(Fuji 1 & 2)Understanding Chilled Water  
Distribution  
(Fuji 3 & 4)

Break Time 10:00 - 10:30

**Session 5**

10:30 - 11:45

IAQ Complaints: Prevention,  
Response, and Resolution  
(Gala 1 & 2)Is Your Building Control System  
Working Up to Snuff?  
(Gala 3 & 4)What Do You Want to Know  
About Boilers?  
(Fuji 1 & 2)Packaged Rooftop Units  
(Fuji 3 & 4)

Break Time 11:45 - Noon

**Lunch Noon - 1:15**

Keynote Speaker: Tom Eckman, Northwest Power and Conservation Council (see page 8 for more details)

Grand Apple South

Keynote Presentation Title: "Future Energy Supply in the Northwest: The Role of Conservation"

Break Time 1:15 - 1:30

**Session 6**

1:30 - 2:30

A Perfect Marriage: Partner-  
ing with State Procurement  
and Correctional Industries to  
Save Time, Money and Effort  
(Gala 1 & 2)Not Just the Same ol'  
Fluorescent Lighting  
(Gala 3 & 4)Hands-on Power Quality  
Measurements  
(Fuji 1 & 2)Evaluating Manufacturer  
Claims for Energy Efficient  
Products & Technologies  
(Fuji 3 & 4)

Break Time 2:30 - 3:00

**Session 3**

2:45 - 3:45

Hot Button Facilities Issues  
Roundtable  
(Gala 1 & 2)The A to Z of  
Accessible Buildings  
(Gala 3 & 4)Tour of Rocky Reach Dam  
Courtesy of Chelan County Public Utility District

## Track A: Facilities Management

### **Ecology Building Case Study - An Approach to Conquering IAQ Issues**

*May 11 at 10:30 - 11:45 a.m.*

*Presenters: Stephen Fry, WA Dept. of Ecology; Joe Jimenez, Guild Communications; and Richard Prill, WSU Co-op Ext. Energy Program*

This session will review a systematic approach to help avoid IAQ related problems as well as an effective means of handling IAQ complaints when they do occur. In many instances, the nature of IAQ complaints is mold related. Non-invasive methods to investigate mold and moisture in buildings will also be presented.

### **Be Prepared When Disaster Strikes**

*May 11 at 1:30 - 2:30 p.m.*

*Presenter: Bill Low, Bill Low & Associates*

Join Bill as he offers expert strategies to lowering your stress by planning ahead. Learn how to be more prepared for operational concerns when unexpected crises hit. What is expected of you? What can you expect of your workers? How can you prepare your staff to carry out their duties effectively during a disaster? Planning now saves a lot of grief in the later post-mortem of your organization's performance.

### **Telling the Story — Taking CAFM to the Next Level**

*May 11 at 3:00 - 4:00 p.m.*

*Presenters: Tom Kuchman, WA Dept. of Transportation, and Mel Vinnie, Essention, Inc.*

Learn how successful computer-assisted facilities management systems can provide the right data for effective management decision making. The Washington state Departments of Transportation and Ecology are highlighted and provide lessons-learned and recommendations. Discover how they have improved reporting capabilities and are working within their agencies on performance measures developed from their system, as well as how they use the data they collect to tell a story about the condition of their facilities, maintenance backlog issues, and level of support.

### **How to Tell Your Story to Financial Leaders and Decision-Makers**

*May 12 at 8:45 - 10:00 am (and May 11 at 3:00 - 4:00 p.m.)*

*Presenter: Dr. Craig Donald, WA Dept. of General Administration*

Learn to motivate financial leaders and decision makers using graphic communication tools and methods. Learn what works and what doesn't. Learn to tell your story in the time it takes the elevator to get from the first floor to your destination.

### **IAQ Complaints: Prevention, Response, and Resolution**

*May 12 at 8:45 - 10:00 a.m.*

*Presenters: Marcia Harris, Peninsula School District, Dianne Knutson, AMEC, and Bryan Visscher, Wenatchee School District*

Learn how to take a systematic approach to help avoid IAQ related problems, and discover an effective means of handling IAQ complaints when they do occur. In many instances, the nature of IAQ complaints is mold related. In response to this, this session will also cover non-invasive methods to investigate mold and moisture in buildings.

### **A Perfect Marriage: Partnering with State Procurement and Correctional Industries to Stretch Your Budget, While Saving Time and Effort**

*May 12 at 10:30 - 11:45 a.m.*

*Presenters: Greg Chamberlain, WA GA State Procurement, Susan Smith, Bill Eads, Correctional Industries and Sean Leer, PortionPac*

Facilities professionals face additional pressure with the Governor's mandate for increased sustainability. Learn how the perfect marriage of Washington state Procurement (OSP) and Correctional Industries (CI) can be a top-notch tool to help you overcome sustainability needs by saving you time, money and resources.

### **Hot Button Facilities Issues Roundtable**

*May 12 at 2:45 - 3:45 p.m.*

*Presenter: Bob MacKenzie, WA Dept. of General Administration*

Staffing cuts, more buildings to maintain, less money allocated for maintenance, "do more with less," ...sound familiar? Join us at the Roundtable to share experiences and to learn of innovative approaches to common challenges. Shirtsleeves up, no nonsense, just professionals finding solutions to vexing issues affecting us all. Finally, what could have been presented at the conference that was not? Did we answer your mail? Join us.

## Track B: Maintenance and Operations

### Building Tune-ups to Improve Your Bottom Line

May 11 at 10:30 a.m. - 11:45 a.m.

Presenter: Mike Moran, Pacific NW Laboratory

Learn about award-winning building tune-up practices to improve your facility's energy performance. These practices can add revenue to your bottom line with little to no capital investment. Case examples from the energy program at Pacific Northwest National Laboratory, winner of IFMA's Golden Circles Award, will be presented.

### How the Approach of Competitive Contracting Helped Us Improve Performance

May 11 at 1:30 - 2:30 p.m.

Presenter: Pattie Williams, WA Dept. of General Administration

Discover how Washington General Administration Custodial Services Program addressed the numerous questions of competitive contracting, including how to determine which of your services are competitive with the private sector in terms of quality, cost and service offerings, as well as how to uncover the factors, in addition to cost, that will influence contracting for services. The audience will also have an opportunity to present their own issues for discussions and brainstorming.

### How to Tell Your Story to Financial Leaders and Decision-Makers

May 11 at 3:00 - 4:00 p.m. (and May 12 at 8:45 - 10:00 am)

Presenter: Dr. Craig Donald, WA Dept. of General Administration

Learn to motivate financial leaders and decision makers using graphic communication tools and methods. Learn what works and what doesn't. Learn to tell your story in the time it takes the elevator to get from the first floor to your destination.

### Getting What We Need to do the Job - CMMS is the Solution

May 12 at 8:45 - 10:00 am

Presenter: Ron Moorehead, WA Dept. of Transportation, Tom Thompson and Tom Hamm, Four Winds Group, Inc.

In the ever-tightening budget times we live in today, how do you justify, keep, and, with luck, receive more funding to accomplish preventive maintenance on your facilities? This session illustrates how Washington state Department of Transportation is managing facilities equipment, what they do to maintain that equipment, and how they fund the needs of the equipment in a building. In addition, this trio will showcase the CMMS for Washington state Ferries and what it took to implement a system that extends from Tacoma to Friday Harbor.

### Is Your Building Control System Working Up to Snuff?

May 12 at 10:30 - 11:45 a.m.

Presenter: Paul Hampton, MacDonald Miller

Everyone knows their building control system is key to effective equipment operation, but not everyone knows how to ensure the system is operating as it should. This session will discuss the capabilities, maintenance requirements, and systems review strategies for common commercial building controls. Identify some of the most underutilized features, as well as how some controls work and don't work.

### Not Just the Same Ol' Fluorescent Lighting

May 12 at 1:30 - 2:30 p.m.

Presenter: Eric Strandberg, Lighting Design Lab

Learn about new technologies coming to market in fluorescent lighting (improved efficiency lamps and ballasts) and how to apply them to your facility. This session will focus on the considerations for shifting maintenance strategies to these new technologies and technical and financial resources available to improve lighting conditions facility-wide. Participants will leave the session with an understanding of lighting choices that will maximize occupant satisfaction while minimizing energy consumption. This session is sponsored by BetterBricks.

### The A to Z of Accessible Buildings

May 12 at 2:45 - 3:45 p.m.

Presenter: Carol Maher, WA Dept. of General Administration

Learn how to effectively maintain the features of a Green Building, as well as its accessibility features. There will also be opportunity for discussion to relate real-life dilemmas and share solutions.



## Track C: The Sustainable Road

### **Alternate Energy - Solar and Wind Technologies**

*May 11 at 10:30 - 11:45 a.m.*

*Presenter: Jim White, Chelan County PUD*

Find out the advantages of solar and wind technologies through real life examples of working solar and wind electric generating projects in Chelan County.

### **The New Kid on the Green Building Block – LEED™ for Existing Buildings**

*May 11 at 1:30 - 2:30 p.m.*

*Presenter: Teresa Burrelsman, Paladino & Co.*

Introduce yourself to the newest guideline in the U.S. Green Building Council's building rating system – LEED™ for Existing Buildings. This session will provide an overview of the LEED-EB guideline and how to apply it to your facility. LEED-EB offers guidance for benchmarking your building's existing performance and setting goals for improving the sustainability of your operation including site, energy resources, materials, water and indoor environmental quality. Learn about green building resources to use in your projects. This session is sponsored by BetterBricks.

### **LEED for Existing Buildings Showcased in the Ecology Building**

*May 11 at 3:00 - 4:00 p.m.*

*Presenters: Stephen Fry, Dept. of Ecology, Ash Awad and Ron Fues, McKinstry Co.*

Hear how the Department of Ecology employed energy savings performance contracting and the LEED EB guideline to apply for LEED Silver certification. Hear about indoor environmental quality issues and other challenges they faced in preparing the facility to be certified. Become an educated consumer of the green building challenges, benefits, and process.

### **Washington Sustainable Schools Program**

*May 12 at 8:45 - 10:00 a.m.*

*Presenter: Jane Simmons, Office of the Superintendent of Public Instruction (OSPI)*

Hear lessons-learned from the innovative Washington Sustainable Schools (WSS) program. Funded by the legislature in the 2003-05 Capital Budget, WSS is applying resource-efficient building techniques to K-12 construction in five pilot schools. Hear about challenges and successes from the folks working in the trenches. Learn about WSS tools and resources you can use in your own districts.

### **What Do You Want to Know About Boilers?**

*May 12 at 10:30 - 11:45 a.m.*

*Presenter: Dwight Briske, Cole Industrial*

Boiler tune-ups can reduce the natural gas consumed by your gas boiler up to 20% and increase steam output. All that translates to savings for you. This session will provide an overview of boiler tune up steps including measuring the oxygen concentration, flue gas temperature and emissions, and adjustments to the air/fuel ratio for optimum operation and reduced emissions.

### **Hands-on Power Quality Measurements**

*May 12 at 1:30 - 2:30 p.m.*

*Presenter: Chris Fate, Snohomish County Public Utility District*

This session is designed for the facility electricians and engineers responsible for identifying, troubleshooting and solving electrical power quality problems. Participants will learn about the relationship between their electrical loads and the power supplied by the utility. The discussion and measurements will include the causes and problems related to harmonics and voltage sags. Hand-on exercises and demonstrations with a Fluke Harmonics Analyzer will ensure a valuable learning experience for a variety of skill levels.

### **Tour of Rocky Reach Dam (Courtesy of Chelan County Public Utility District)**

*May 12 at 2:45 - 5:00 p.m. (Please plan on the possibility of this running a bit longer)*

See page 8 for more details on the Rocky Reach Hydroelectric Project.

## Track D: Technology and Resources

### The Latest in Energy Efficiency Technologies

May 11 at 10:30 - 11:45 a.m.

Presenter: Tom Lienhard, Avista

Find out the latest in building energy efficiency technologies to give you a jump start in elasticizing your wallets through energy savings.

### Good to the Last Drop (Part 1): Water Reductions to Save Costs

May 11 at 1:30 - 2:30 p.m.

Presenters: Michael Laurie, Watershed, LLC (Introduction by Bob Bippert, WA Dept. of General Administration)

Learn proven water conservation strategies employed in facilities to dramatically reduce water and sewer consumption and cost. Participants will leave the session with an understanding of water conservation measures they can utilize in their own facilities, as well as tools for making the business case to decision makers for water efficiency improvements. Part I will address leaks, deduct meters, toilets and urinals, kitchen and laundry equipment, and improved cooling tower and boiler operation practices.

### Good to the Last Drop (Part 2): Landscape, Retrofits and More

May 11 at 3:00 - 4:00 p.m.

Presenter: Michael Laurie, Watershed, LLC

See Part 1 for description. Part II will address landscape practices, service agreements and retrofit options.

### Understanding Chilled Water Distribution

May 12 at 8:45 - 10:00 am

Presenter: Eric Moe, Flow Control Industries

Learn about how chilled water systems offer opportunities for energy savings and increased occupant comfort, hear about effective benchmark and analysis tools for evaluating large chilled water systems, and discover some simple steps to provide more cooling with less equipment and reduced energy costs.

### Packaged Rooftop Units

May 12 at 10:30 - 11:45 a.m.

Presenter: Bob Davis, Ecotope

Research shows that even well-maintained packaged rooftop equipment often performs poorly, wasting energy and causing occupant complaints. Learn about diagnostic approaches and state-of-the-art tools that can optimize the performance of your rooftop units, save money and increase occupant comfort. Whether you service your own equipment or work under a service agreement, this approach offers a new premium service which will benefit your facility.

### Evaluating Manufacturer Claims for Energy Efficient Products and Technologies

May 12 at 1:30 - 2:30 p.m.

Presenter: Jack Zeiger, Washington State University

Take an in-depth look into the world of cutting-edge, energy-efficient technology and how it can and should take part in how your operations purchasing decisions that regard energy use, including HVAC, refrigeration, and electrical equipment.

### Tour of Rocky Reach Dam (Courtesy of Chelan County Public Utility District)

May 12 at 2:45 - 5:00 p.m. (Please plan on the possibility of this running a bit longer)

See page 8 for details on the Rocky Reach Hydroelectric Project

**The Coast Wenatchee  
Center Hotel:**  
201 North Wenatchee Avenue  
Phone: 509-662-1234

## Meet the Keynote Speakers...



Lander Medlin is the Executive Vice President of APPA (The Association of Higher Education Facilities Officers). Representing more than 1,600 institutions of higher learning in the United States, Canada, and internationally, APPA serves the needs of facilities professionals in management, planning, and development of campus facilities and provides leadership on significant facilities issues.

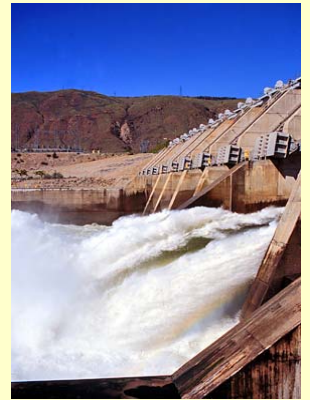


Tom Eckman is a senior analyst with the Northwest Power and Conservation Council which provides analysis and information about electricity demands, new technologies, and interactions between hydro-power and fish. The Council also has a legal mandate to encourage energy conservation and efficiency in the Northwest, and to develop a regional power plan.

### Tour of the Rocky Reach Dam

(Courtesy of Chelan County Public Utility District)

- 11 generators.
- Peak generating capability - 1,287,000 kilowatts.
- Dam contains 12 spillway gates.
- Original construction started in 1956.
- Commercial Operation 1961 (seven generators)
- Four generators added in 1969 - 71
- Project license expires in the year 2006.



The Rocky Reach Hydro Project is located in north central Washington state on the Columbia River, about seven miles upstream from the city of Wenatchee. By river, the dam is 215 miles below the Canadian border, and 473 miles above the mouth of the Columbia at Astoria, Ore. More than 7 million people throughout the Northwest benefit from clean, renewable energy produced at Rocky Reach. The project is also nationally recognized for efforts to protect the environment. A first-of-its-kind juvenile fish bypass system was completed in 2003 to help young salmon and steelhead on their way to the ocean. A major powerhouse upgrade started in 1995 includes new turbines that are more fish friendly. Improvements to turbines and generators are also designed to improve efficiency and reliability. For more information, visit the website at <http://www.chelanpud.org/hydro/rr/ROCKY.htm>

## Contact us!

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### Plant Operations Support Consortium

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<http://www.ga.wa.gov/plant>

## Things to do in Wenatchee...

- Minutes away from golfing at Highlander Golf Club, Desert Canyon, and many others.
- Access to the River Walk Crossing, connecting the hotel and convention center to River Front Park and the Apple Capitol Loop Trail.
- Nearby shopping in historical downtown Wenatchee and "Art on the Avenue."
- Visit the beautiful Ohme Gardens, just minutes away. Call (509)662-5785 for more information.

